NOAA's National Weather Service

Hourly Precipitation Analysis

"Experimental"

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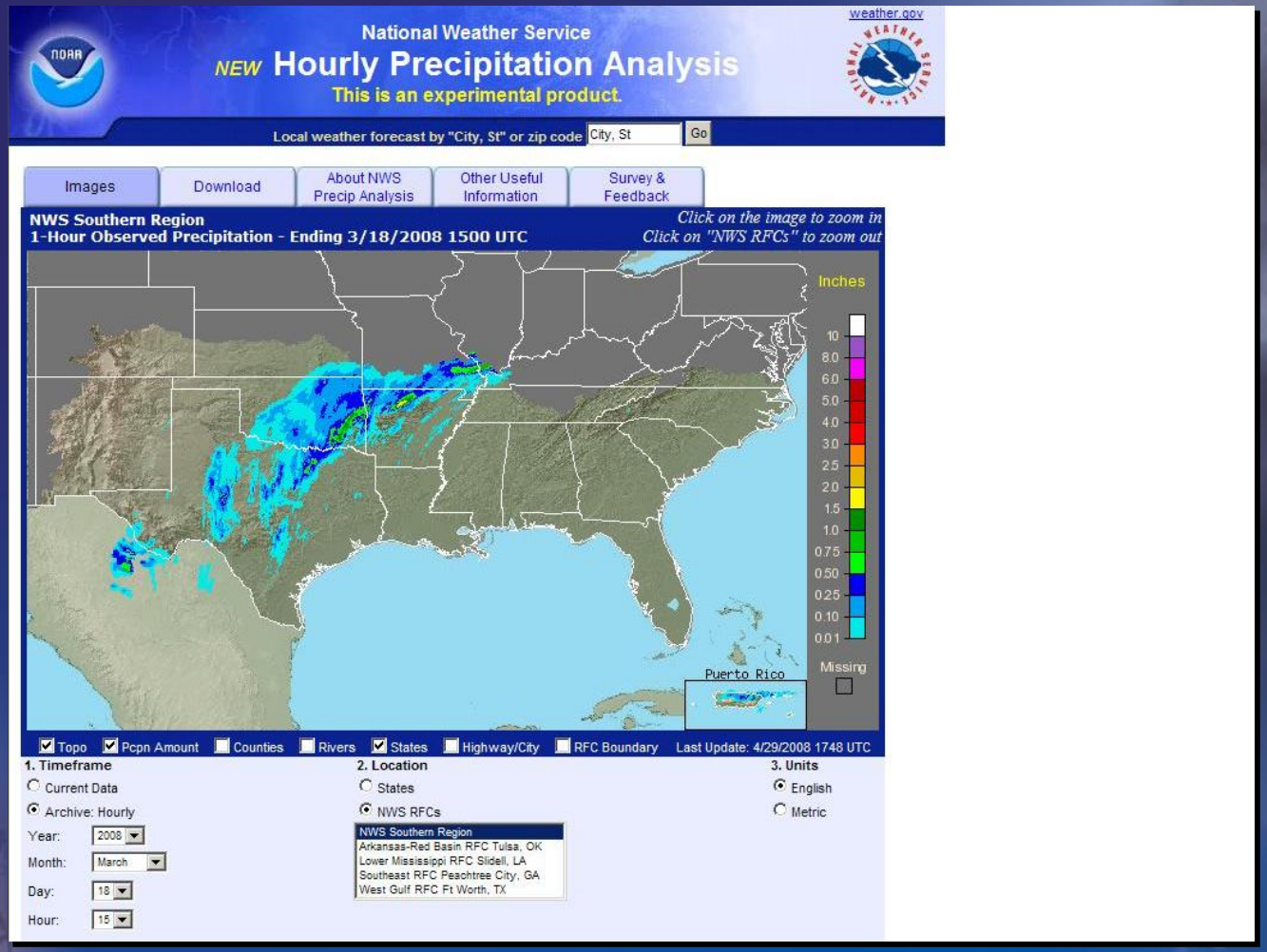
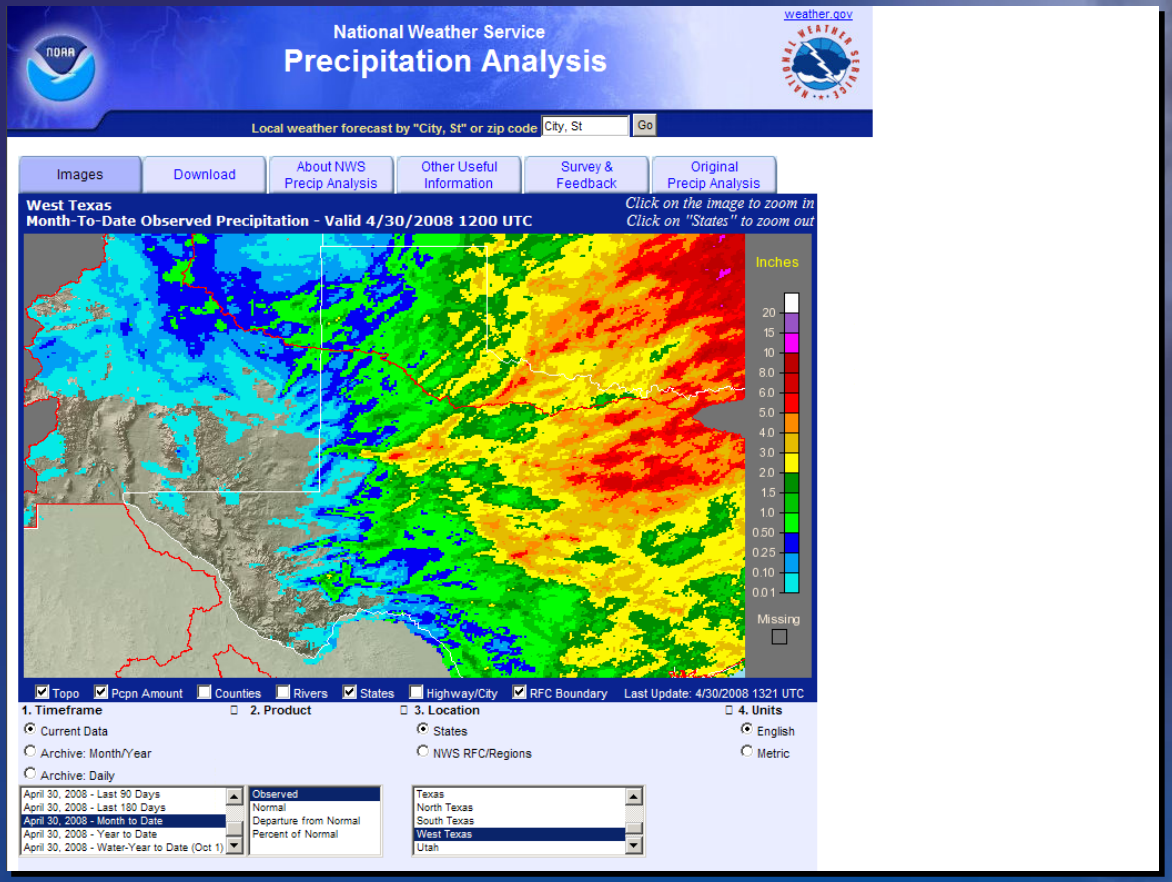
West Gulf River Forecast Center
May 2008



What is it?

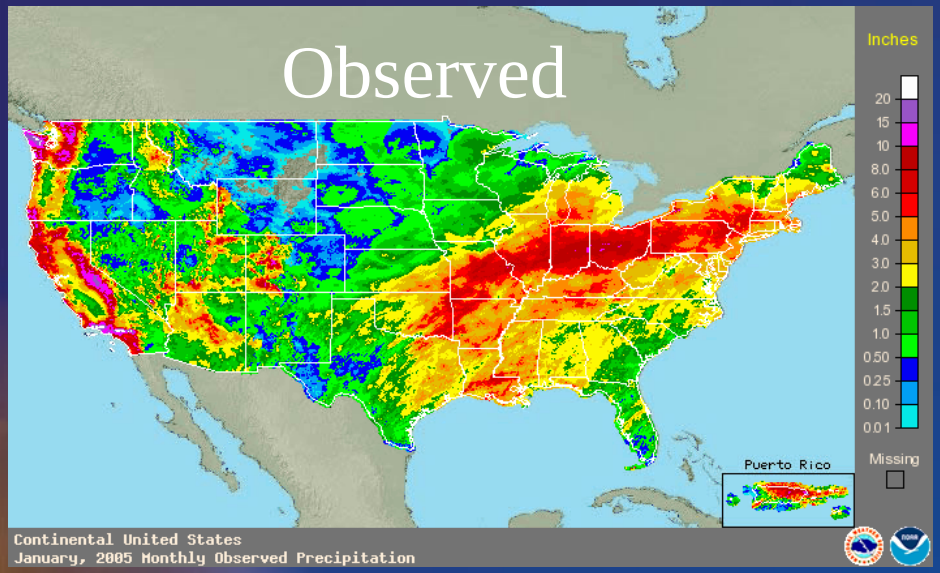
http://www.srh.noaa.gov/rfcshare/precip_analysis_hourly.php

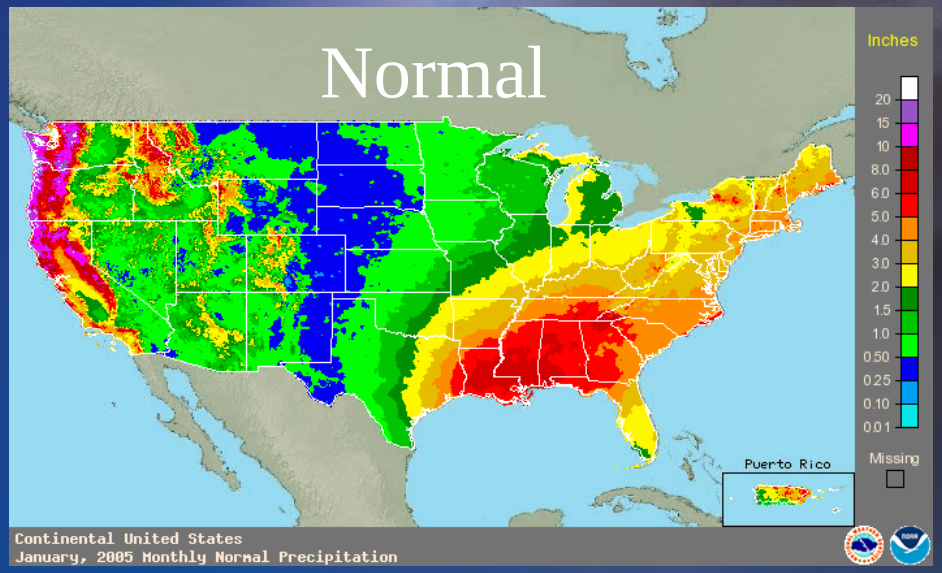


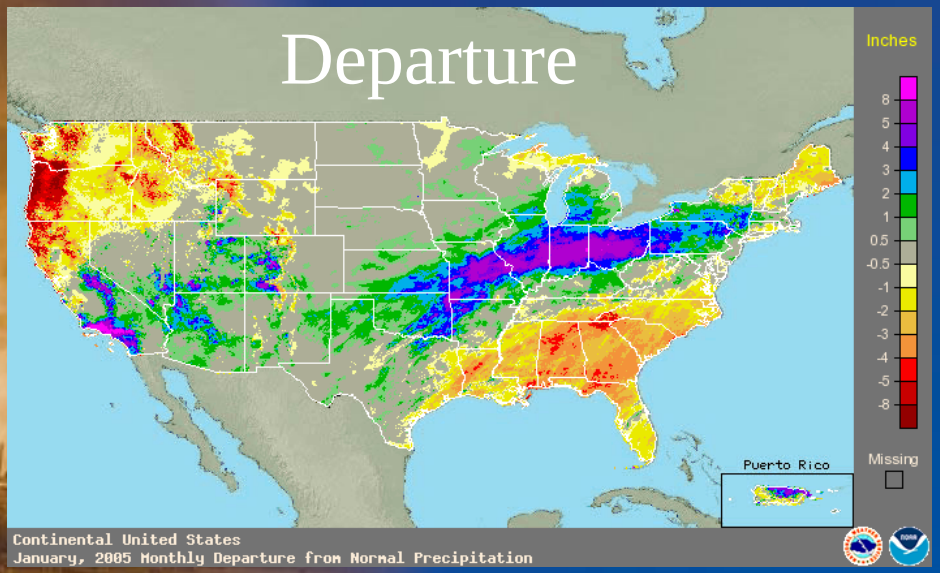
Developed subsequent to National Daily Precipitation Analysis Product with 1 hour data

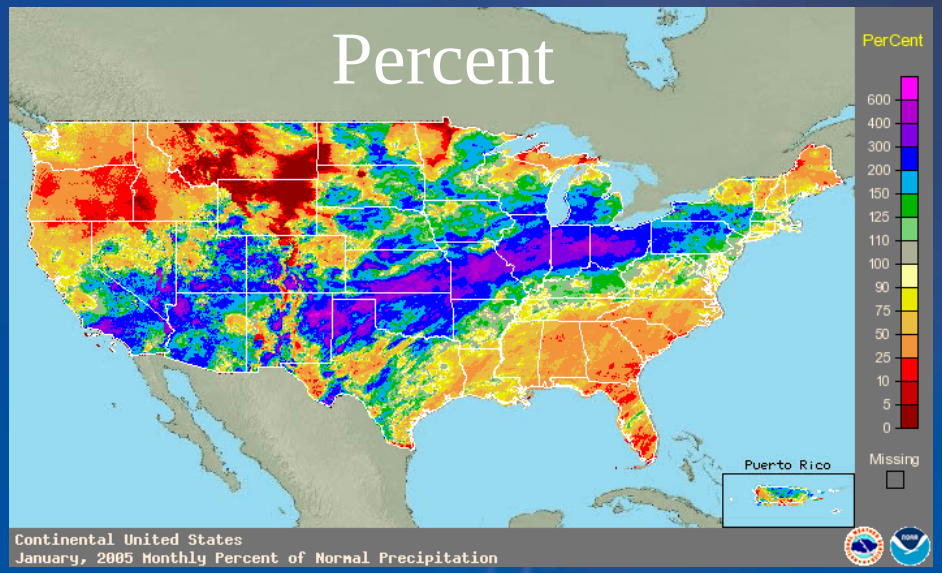
http://www.srh.noaa.gov/rfcshare/precip_analysis_new.php

The Precipitation "Analysis"









Observed Precipitation

- Latest short-term observed precipitation across NWS Southern Region and Puerto Rico.
- Data from mosaic of 4 NWS RFCs in NWS Southern Region
- Displayed with 4x4 km resolution
- "Observed" data is expressed as a short-term duration total ending at the hour indicated in UTC (same as Greenwich Mean Time, or GMT). For example 1200 GMT coincides with 8 AM EDT, 7 AM EST, 7 AM CDT, 6 AM CST, etc.

Observation Methods

- Precipitation grid produced using a multisensor approach
- Estimates from WSR-88D NEXRAD are compared to rainfall gauges, and a bias (correction factor) is calculated and applied to the radar field
- Radar and gauge fields are combined into a "multisensor field", which is quality controlled on an hourly basis
- In areas where there is limited or no radar coverage, satellite precipitation estimates (SPE) can be incorporated into the multisensor field. The SPE can also be biased against rain gauge reports.
- NSSL Q2 radar estimated precipitation can be used beyond the standard 124nm limit where radar estimates were previously not available

Quality of Data

- "Observed" data is vulnerable to inaccuracies that can be caused by either radar or precipitation gages
- For radar, problems include freezing or frozen precipitation, low topped convection, bright banding, the reflectivity / rainfall relationship in use, calibration of the radar, radar location and elevation, range degradation, and the radar's effective coverage
- For precipitation gages, problems include freezing precipitation, windy conditions, gage siting, undermeasurement by tipping bucket gages in high intensity rainfall, and gage maintenance.

Production / Update Times

- The hourly precipitation analysis pages are routinely update each hour, at approximately 50 minutes past the hour
- Data are preliminary and subject to change, they are neither official nor certified. Please contact the National Climatic Data Center for certified past weather information.

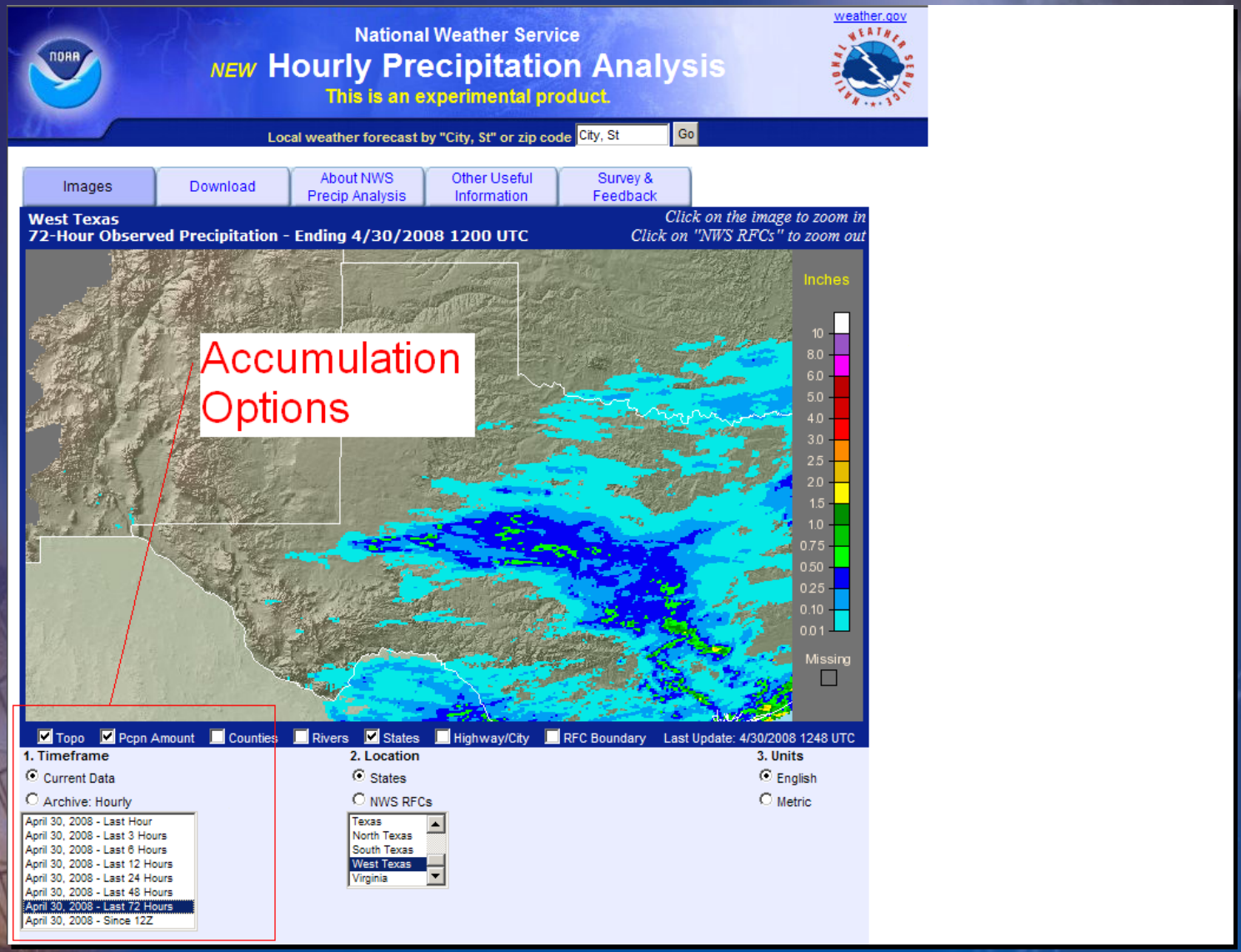
Data Formats

- GIF format for viewing
- Shapefile and netCDF formats for download

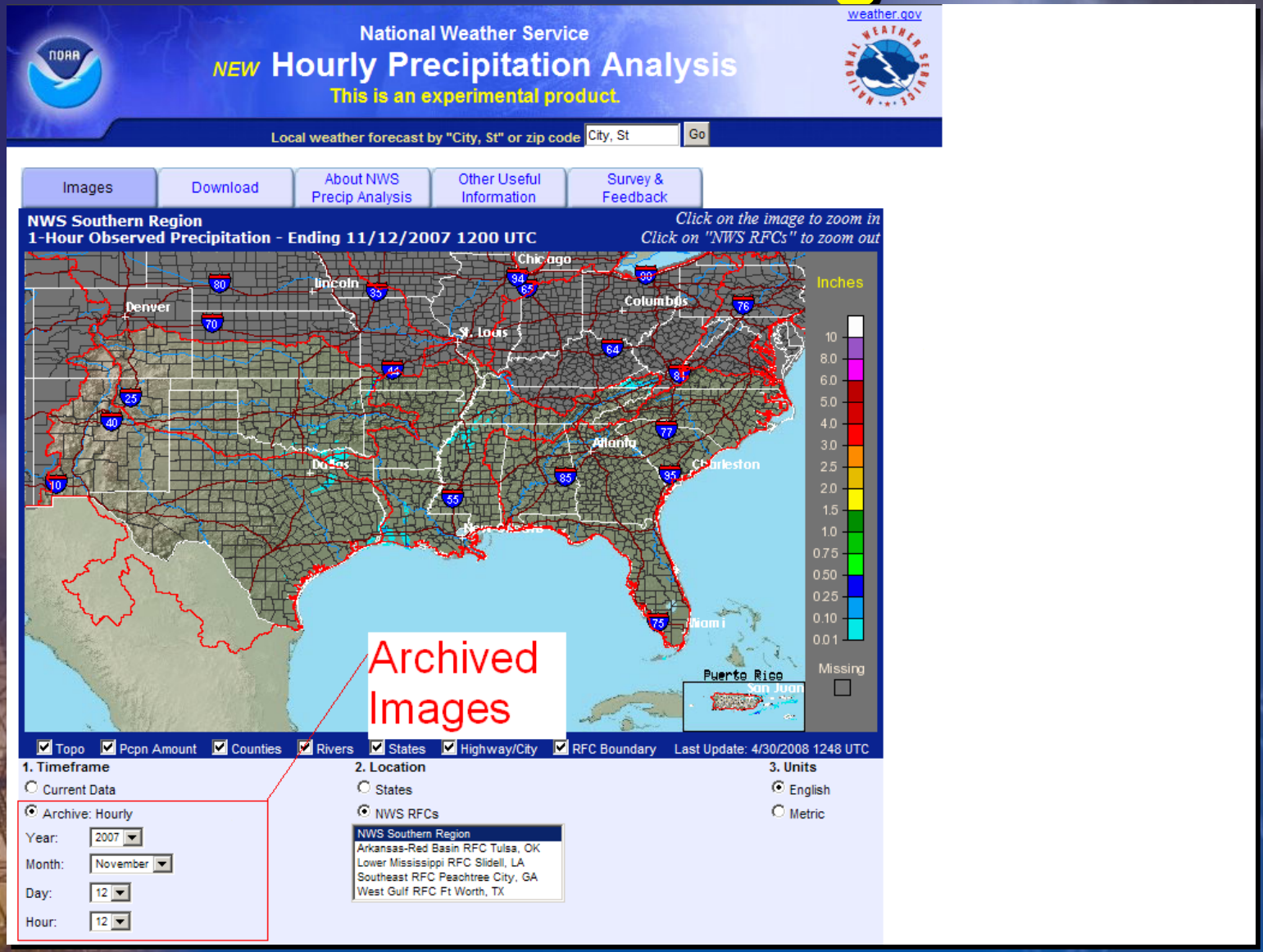
Experimental?

- The Southern Region Hourly Precipitation Analysis web site is not an official NWS product receiving national support. It is produced, served, and maintained by Southern Region NWS

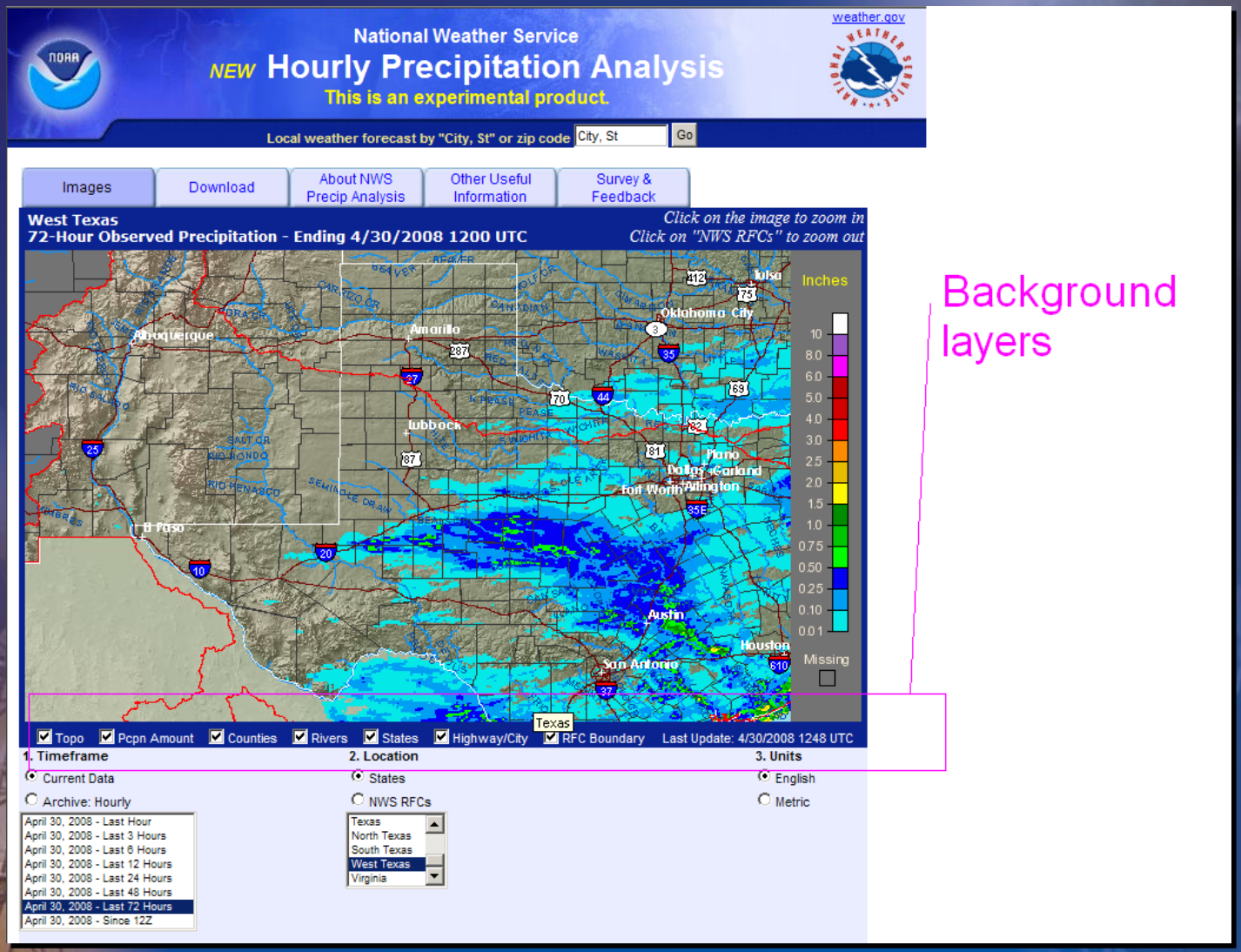
Hourly Accumulation



Archived Images

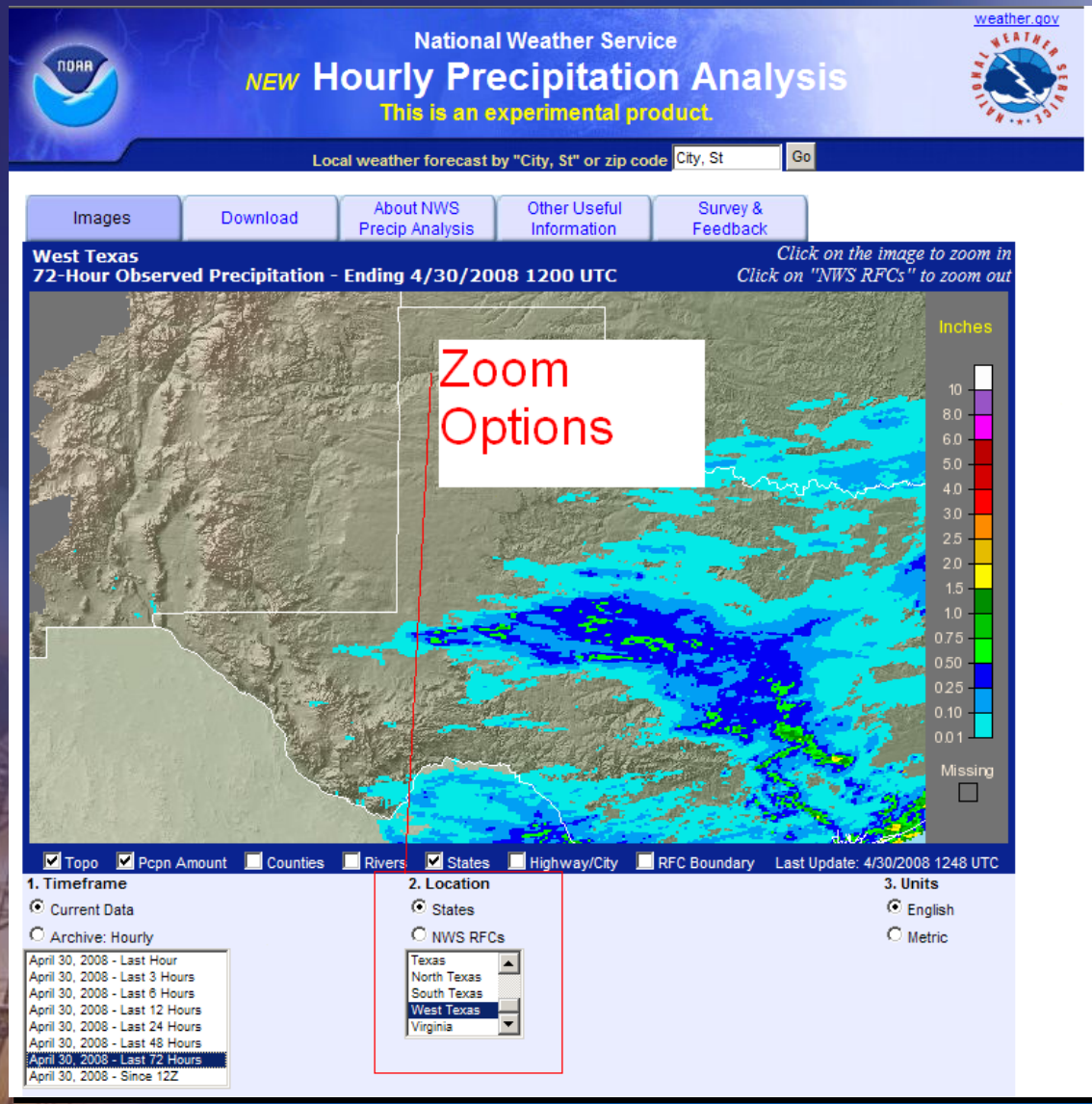


Available Backgrounds



Background layers

Preset Zooms



Download Shapefiles

Downloading Hourly Gridded Rainfall Data

Last Update: 4/30/2008 1347 GMT

(1) Select Download	(2) Select Date Month Day Hour Year	(3) Press the "Download" Button
NWS Southern Region Legend File	Apr 30 13 2008	Download Now!

File Name	Files Included	Size
nws_precip_2008043013.tar.gz	nws_precip_2008043013.shp nws_precip_2008043013.shx nws_precip_2008043013.dbf	Approx 0.5 to 7.0 MB

General Information

The precipitation data are quality-controlled, multi-sensor (radar and rain gauge) precipitation estimates obtained from National Weather Service (NWS) River Forecast Centers (RFCs). The original data are in XMRG format and projected in the Hydrologic Rainfall Analysis Project (HRAP) grid coordinate system, a polar stereographic projection true at 60°N / 105°W. Our software reads each participating RFC's XMRG file and grabs the hourly precipitation estimate for each HRAP grid cell.

Use the form above to download these files. Alternatively, you can download a progam called wget that mimics ftp capability. Due to increased web security, the anonymous FTP server is no longer available.

At this time, data files prior to 2008 are unavailable from this page.

If you have any questions or problems, please contact SR-TUA.Precip@noaa.gov.

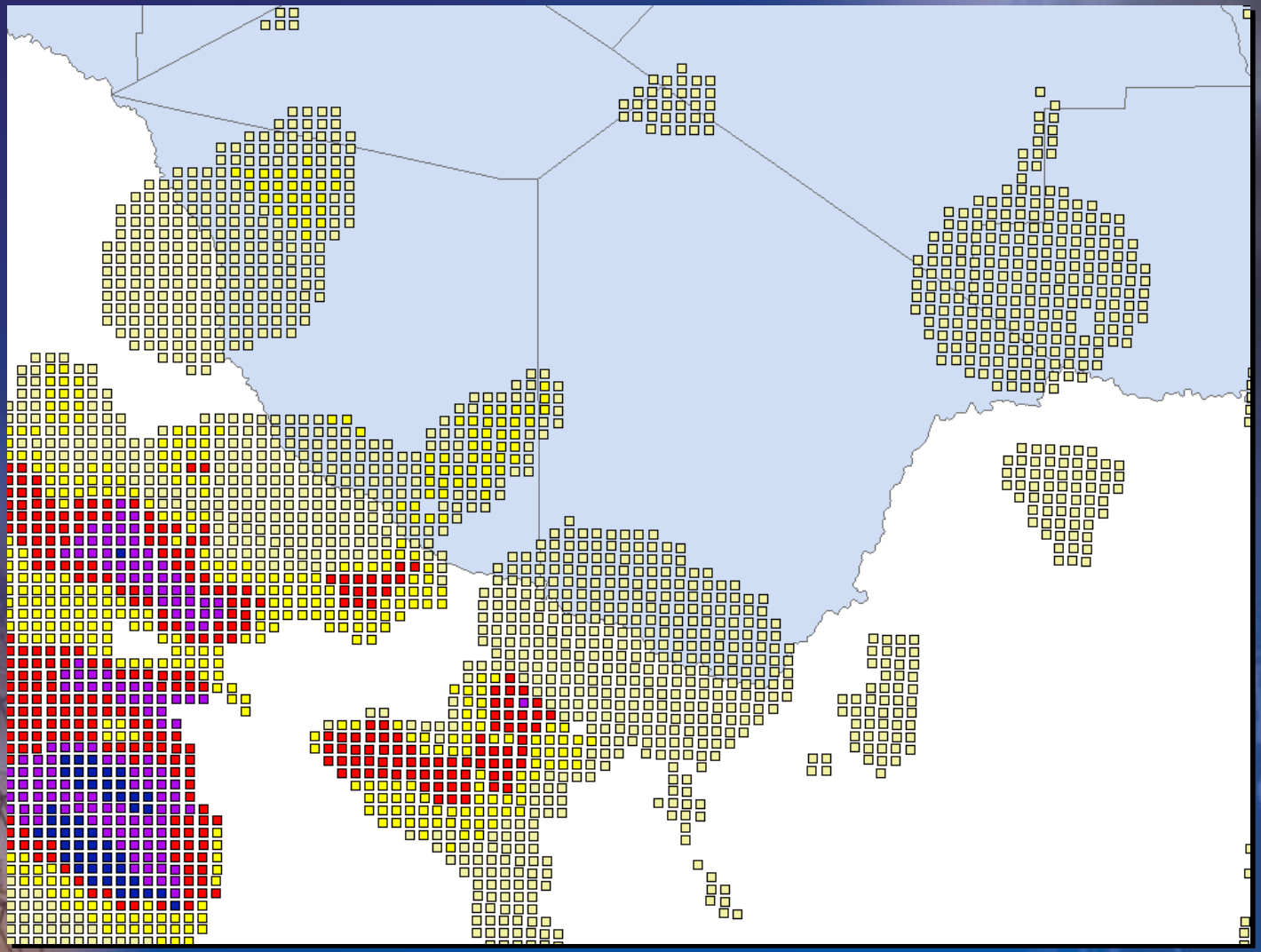
Shapefile Information

The shapefile contains the following fields:

1. *id* - a unique value for each grid bin
2. *hrapx* - column number of the HRAP grid cell (higher numbers are further north)
3. *hrapy* - row number of the HRAP grid cell (higher numbers are further east)
4. *latitude* of the HRAP grid point
5. *longitude* of the HRAP grid point
6. *globvalue* - 24-hour precipitation value in inches. "-1" values correspond to "No Data", e.g. data over the ocean. "-2" values correspond to "Missing Data", e.g. an incomplete dataset.

The second download option "Legend File" will help you reproduce the color scheme we are using. If using ArcView, you will need to copy it into your `c:\esri\av_gis30\arcview\legend_avl\` directory and load it manually through the legend editor. This file does not change from day to day.

Custom GIS Applications



Future Enhancements

- Increased Zoom Capability
- Rt click image capture
- Back-populate image and shapefile archive
- KMZ files for Google Earth

Questions?

West Gulf River Forecast Center

Fort Worth, Texas

www.srh.noaa.gov/wgrfc